



**Michigan Department of Labor & Economic Growth
Bureau of Construction Codes
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Bureau of Construction Codes Technical Bulletin

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Gas Fired Water Heater Installation

“Providing for Michigan’s Safety in the Built Environment”

Technical bulletins are issued to provide clarification on issues that arise regarding code administration and enforcement. The information provided in the bulletin is developed to promote uniform interpretation and enforcement of the state codes.

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GAS FIRED WATER HEATER INSTALLATION

Issue

This document has been prepared in response to requests for clarification of the requirements for the installation of gas fired water heaters and to set forth the appropriate licensing and installation standards by which such installations should be measured.

Discussion

The installation of a gas fired water heater encompasses at least two trades and could involve others as well. The installation standards for gas fired water heaters are found in both the Michigan Plumbing and Mechanical Codes. The Michigan Plumbing and Electrical Codes similarly regulate electric water heaters.

The determination of who may install gas fired water heaters is accomplished by a review of both the Plumbing Licensing Law and the Forbes Mechanical Contractors Act.

This report will explore both facets of the regulations (licensing and code) and set forth the policy of the Bureau of Construction Codes (Bureau). This report also recommends changes in the respective codes and licensing laws for the installation of water heaters.

Code Provisions

Michigan Mechanical Code

The Michigan Mechanical Code provides for the installation of boilers and water heaters. It covers such provisions as safety and pressure relief valves, gas piping, venting, and materials for installation.

A water heater is defined as:

“Any heating device that heats potable water and supplies it to the potable hot water distribution system.”

The gas piping to any fuel fired appliance is regulated through the code by defining the type and size of piping and setting forth the installation standards for the piping.

The venting of all flue gases is regulated by the code through the materials, sizing, and installation of the venting system.

Potable water connections are regulated as well. Section 601.1 states, in part:

“ . . .the potable water connections and relief valves for all water heaters shall conform to the requirements of the plumbing code listed in Appendix A.”

Michigan Plumbing Code

The Michigan Plumbing Code defines water heaters in the same manner as the Michigan Mechanical Code. Also, the minimum size of the water heater, pressure rating, drain valves, performance efficiency, safety devices, and other considerations are provided for within the plumbing code. Additionally, the plumbing code references the mechanical code for the installation of water heaters. Specifically, section 502.1 states:

“Water heaters shall be installed in accordance with the manufacturer’s installation instructions. Oil-fired water heaters shall conform to the requirements of this code and the *International Mechanical Code*. Electric water heaters shall conform to the requirements of this code and provisions of the ICC *Electrical Code*. Gas-fired water heaters shall conform to the requirements of the *International Fuel Gas Code*.”

Licensing Provisions

The Forbes Mechanical Contractors Act, PA 192, of 1984, as amended

PA 192 of 1984, as amended, provides for the licensing of all persons performing the installation, alteration, and servicing of specified heating, cooling, ventilating, and refrigeration equipment and systems.

This act defines heating as:

“Used alone, means the use of any fuel or electricity to generate heat in an air conditioning system. When used with a qualifying term such as ‘hydronic’, the term heating assumes the limited meaning expressed by such qualification.”

The language contained in the law sets forth certain categories for licensure, including:

- Hydronic heating and cooling process piping
- HVAC equipment
- Ductwork
- Refrigeration
- Limited service, heating and refrigeration
- Unlimited service, heating and refrigeration
- Fire suppression
- Specialty

Within the categories are the crafts of gas piping and flue venting of gases, which are the byproducts of combustion equipment.

PA 192 of 1984, as amended, provides for the testing and licensing of contractors based upon a test of proficiency of individuals in the contracting business. However, individual

practitioners performing the installations are not so licensed under the law. The basis of the law is to hold the contractor responsible for the work.

Plumbing, 2002 PA 733

2002 PA 733 provides for the licensure of individuals performing plumbing work, as well as contractors. Plumbing is defined as:

“(b) “Plumbing” means the practice, materials, and fixtures, in or adjacent to a building, structure, or premises, used in the installation, maintenance, extension, or alteration of all piping, fixtures, plumbing appliances, plumbing appurtenances, as defined by the code, in connection with the sanitary drainage or storm drainage facilities, plumbing venting systems, medical gas systems, backflow preventers, and public or private water supply systems.”

This legislation places reliance on the plumbing code for definition of various components. Only licensed master and journey plumbers may perform plumbing work as defined in the law.

Conclusion

While the codes provide for the regulation of all aspects of the installation of water heaters, the licensing criteria does not specifically delineate the requirements for practitioners.

Either an authorized master plumber or a mechanical contractor may install a water heater. However, a duly licensed plumber under the provisions of 2002 PA 733 must install the potable water lines. Similarly, the installation of gas piping and vent flues are under the jurisdiction of PA 192, of 1984, as amended, requiring a licensed mechanical contractor to secure the permit and supervise the installation.

The Attorney General Opinion does allow non-licensed plumbers to make connections of water heaters with water supply and drainage systems.

Authorized master plumbers, who wish to continue the installation of water heaters, including the installation of the mechanical aspects of the installation, may apply for a specialty license including gas piping and venting or an HVAC license to perform this work.

Mechanical contractors who wish to install potable water lines are required to be licensed under the provisions of PA 266 of 1929, as amended.

Tradition has indicated that plumbers have installed gas piping and water heaters prior to the enactment of the Forbes Mechanical Contractors Act. Both mechanical contractors and plumbers have performed the installation of replacement water heaters. The

installation of new equipment has not posed a problem, as both trades are typically on-site during the course of construction.

Permitting of a replacement installation has caused some difficulty in the past, however the Bureau will be modifying its permits to allow a mechanical or plumbing contractor to install replacements under a single permit. The licensing requirements for practitioners will remain as currently provided by the two licensing laws. Inspections will be conducted to assure compliance with the applicable code provisions. The mechanical and plumbing permit applications will be revised to include an affidavit for certification that appropriate licensed individuals will perform the work to install replacement gas fired water heaters.

Because the two licensing provisions are incomplete in the regulation of water heater installation, changes will be recommended to both provisions to clearly set forth the limits for installation.

Questions regarding this technical bulletin may be directed to the Michigan Department of Labor & Economic Growth, Bureau of Construction Code, P.O. Box 30254, Lansing, MI 48909 or by calling (517) 241-9330 (Plumbing Division) or (517) 241-9325 (Mechanical Division).